

**CIRCUIT FOR WRITE FIELD DISTURBANCE CANCELLATION IN  
AN MRAM AND METHOD OF OPERATION**

5

**Abstract of the Invention**

A circuit and method for counteracting stray magnetic fields generated by write currents in an MRAM memory reuses the write current in adjoining write columns via a current redistribution bus at a first end of the write lines. A  
10 first switch connected to a second end of each write line controls the write current in the write line. If the first switch is not conductive, a second switch connects the second end of the write line to a reference voltage terminal. For write lines located at sub-array edges, a predetermined amount of spacing may be used to avoid magnetic field disturbance in an adjacent sub-array. The  
15 number of spaces required can be minimized by specific activation of write line switches.